

## REMARKS/ARGUMENTS

### Remarks concerning amendments to claims

Claims 14-22 remain in this application. Claims 1-13, and 15 have been canceled. Claim 1 has been amended.

### Response to rejections

The Office Action has rejected claims 14—15, 17 and 21-22 under 35 USC 103 as being unpatentable over Kline (US 2004/0210154) in view of Fishman (US Pat. No. 5271401) and further in view of Griffin et al. (US Pat. No. 6197575).

Applicant traverses on the grounds that not all the claim limitations are taught by the cited references.

The Office Action has misinterpreted the teachings of Kline, where the Office Action states that Kline discloses an analysis unit 82 that includes a vacuum pump 108 that is capable of controlling the gas.

The Applicant respectfully avers that Kline teaches [0062]:

“Analysis unit 82 further includes data processor 106 interconnected to light detector cell 104. The process of aspirating gas from flow tube 80 to the analyzing chamber 96 may result in a several second delay between flow data generated by sensor device 84 and corresponding data generated from measurements in analyzing chamber 96. The computerized processing must

therefore correct for the delay to align the plots of expired gases as a function of time accurately, and as a function of each other, and with respect to time. Data processor 106 is therefore programmed to precisely align, for example, the measured initial CO<sub>2</sub> rise with the initial O<sub>2</sub> drop, such that the ratio of each gas can be plotted as a continuous measurement throughout the entire exhaled breath.

**Analysis unit 82 may include a vacuum pump 108 for controlling the amount of air withdrawn from flow tube 80.** (emphasis added by Applicant)

The Applicant respectfully avers that **the vacuum pump of Kline controls the gas diverted to an analyzer, not administered** to a human or animal, as recited in amended claim 1. Kline further teaches **measuring a ratio of air containing carbon dioxide breathed in versus the concentration of carbon dioxide exhaled** by a patient. **This is very different from varying the levels of vasoactive agents that include CO<sub>2</sub> and O<sub>2</sub> administered in opposition or alternation to the subject.** (emphasis added by Applicant)

The Office Action further states that Fishman discloses administer a mixture of gases such as oxygen and carbon dioxide [see col. 7, lines 20-43].

The Applicant respectfully avers that Fishman does not teach an image acquisition means for **acquiring images of a region of interest before and during administration of the varying levels of vasoactive agents that includes CO<sub>2</sub> and O<sub>2</sub> being administered in opposition or alternation**, as recited in amended claim 1. Instead, Fishman teaches a fixed concentration of

gases during one examination and comparing this measurement with previous examinations not including the gas. Specifically, Fisher teaches (col. 7, lines 28-38):

“The patient having one examination using one of the approaches above, followed by an examination in which a therapeutic amount of carbon dioxide or helium is delivered to the patient in mixture form, to compare and evaluate the physiological response to varying percentages of carbon dioxide or helium by the patient with the images and data obtained in the non-altered state, thereby potentially providing information of value in determining the impact of respiratory therapy gas mixtures containing carbon dioxide or helium in treating the patient's condition.” (emphasis added by Applicant)

The Applicant respectfully avers that the prior art of record does not teach acquiring images of a region of interest before and during administration of the varying levels of vasoactive agents that includes CO<sub>2</sub> and O<sub>2</sub> being administered in opposition or alternation as recited in amended independent claim 1. Therefore, the rejection to claim 1 is moot.

Because claims 16-22 are dependent on independent claim 1, and from the arguments above independent claim overcomes the rejections, the rejections to claims 16-22 are now moot.

Applicant hereby submits a bona fide attempt to address the rejections in the Office Action and provide arguments why the present claims are patentable over the cited references. The Examiner is invited to telephone the undersigned at 650-424-0100 for clarification or any suggested actions such as an Examiner's Amendment to advance the prosecution of the present application. Applicant kindly requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

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